

ABSTRACT

The disclosure includes description of a method of noise reduction according to one possible implementation. An audio signal is sampled at a sample rate f . The audio signal is converted to a digital signal in the time domain. For each of a series of frames of time, the digital signal in the time domain is converted to a digital signal in frequency domain for the frame of time. The converting includes determining a set of frequency domain values. The frequency domain values in the set are created by a set of digital filters, and the digital filters are related to each other by a constant ratio of filter bandwidth to center frequency, related to a perceptual scale for audio processing. A set of minimum magnitude frequency domain values is obtained. These values include, at each frequency represented by the frequency domain values, a frequency domain value having a minimum magnitude from among frequency domain values for such frequency over a time interval spanning multiple frames of time. The set of minimum magnitude frequency domain values are subtracted from the audio signal and the frequency domain, for a particular frame of time. The subtracted audio signal is converted to the time domain, and the converted audio signal is output. The disclosure also includes description of a communication device, a playback device, a multimedia recording device, a recording device, and other devices and processes.